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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,401	12/03/2003	Hirokazu Masuda	SAS2-PT064	5598

3624 7590 11/01/2005

VOLPE AND KOENIG, P.C.  
UNITED PLAZA, SUITE 1600  
30 SOUTH 17TH STREET  
PHILADELPHIA, PA 19103

EXAMINER
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SELLS, JAMES D

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/726,401

Applicant(s)

MASUDA, HIROKAZU

Examiner

James Sells

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al (US Patent 6,793,756) in view of Horvath (US Patent 5,250,146).

Lee discloses a substrate bonding apparatus. As shown in Fig. 3, the apparatus comprises bonding chamber 110, vacuum unit 200, upper stage or retaining table 121 and lower stage or retaining table 122. Upper stage 121 includes electrostatic chuck 121a and vacuum holes 121b for receiving and holding substrate 520 there against. Lower stage 122 includes electrostatic chuck 122a and vacuum holes 122b for receiving and holding substrate 510 (see col. 9, lines 1-15). Motor 133 then drives upper stage 121 toward lower stage 122 to press and bond the materials there between. Fig. 4 shows the face of stage or retaining table 122 including a plurality of pieces of electrostatic chuck 122b separated by support parts 410a and 410b and vacuum holes 122b.

However, Lee does not disclose the elastic material as claimed by the applicant. Regarding this difference, the applicant is directed to the reference of Horvath.

Horvath discloses an apparatus for laminating materials. As shown in Fig. 1, the apparatus comprises lower saddle or ram 12 and upper ram 14. Upper ram 14 is

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provided with a layer 16 of silicone rubber having a Shore hardness of 35 to 65 (see col. 11, lines 29-31). Such a material inherently allows the pressing surface of the ram to deform to accommodate irregularities without damaging the materials being pressed. For these reasons, it would have been obvious to one having ordinary skill in the art to employ a silicone rubber material having a Shore hardness of 35 to 65, as taught by Horvath, in the apparatus disclosed by Lee.

Regarding claim 1, although not explicitly stated by Horvath, the material 16 appears to be made of the same nonviscous material both disclosed and claimed by the applicant (i.e. elastic with a Shore-A hardness of 40 to 90). Therefore it is the examiner's position that the material 16 of Horvath functions in the same manner as applicant's claimed elastic material.

Regarding, claims 2 and 4-7, it is the examiner's position that when employing the elastic material 16 disclosed by Horvath on the bonding apparatus shown in Fig. 4 of Lee that it would have been obvious to one having ordinary skill in the art to divide the elastic material into a plurality of pieces in order to cover the plurality of pieces of the electrostatic chuck 122b disclosed by Lee.

### ***Response to Arguments***

3. Applicant's arguments filed August 15, 2005 have been fully considered but they are not persuasive.

Applicant argues the references of Lee and Horvath do not disclose the elastic material being nonviscous at least at a surface which retains the substrate. The

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examiner does not agree. As stated above, although not explicitly stated by Horvath, the material 16 appears to be made of the same nonviscous material both disclosed and claimed by the applicant (i.e. elastic with a Shore-A hardness of 40 to 90).

Therefore it is the examiner's position that the material 16 of Horvath functions in the same manner as applicant's claimed elastic material. Thus the applicant's argument is believed to be incorrect in this instance.

Applicant argues the references do not teach dividing the elastic material into a plurality of elastic pieces as claimed by the applicant. The examiner does not agree. As stated above, it is the examiner's position that when employing the elastic material 16 disclosed by Horvath on the bonding apparatus shown in Fig. 4 of Lee that it would have been obvious to one having ordinary skill in the art to divide the elastic material into a plurality of pieces in order to cover the plurality of pieces of the electrostatic chuck 122b disclosed by Lee. Therefore the applicant's argument is believed to be incorrect in this instance.

#### ***Telephone/Fax***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Sells whose telephone number is (571) 272-1237. The examiner can normally be reached on Monday-Friday between 9:30 AM and 6:00 PM.

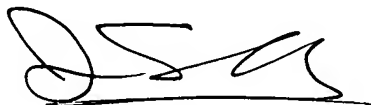
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached at (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



**JAMES SELLS  
PRIMARY EXAMINER  
TECH. CENTER 1700**